DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-027258
Date Inspected: 29-Feb-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name: Bernie Docena

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS Tower

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

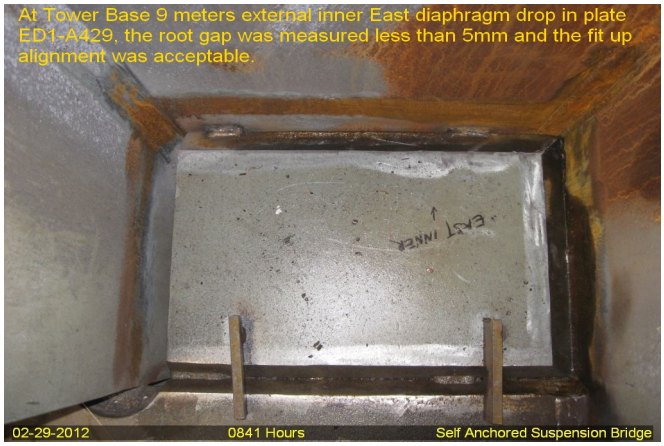
At Tower Base 9 meter external diaphragms, the following welding activities were observed;

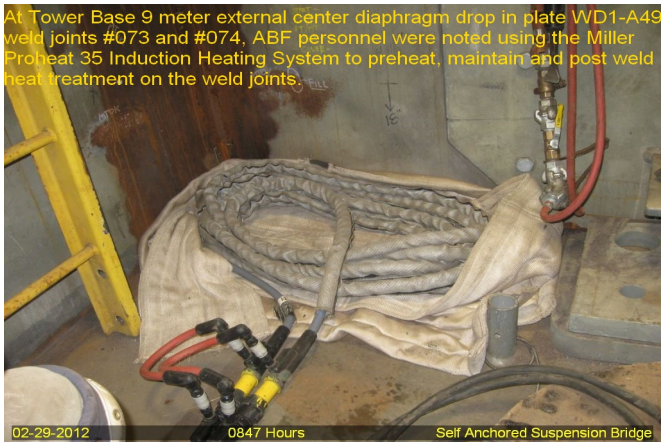
1. Center diaphragm drop in plate WD1-A49 weld joint #073(1 and 2) /#074 (1 and 2), ABF welder Wai Kitlai was observed perform root pass welding on the PJP T-joint between the 45mm drop in plate and shear plate and splice butt joint to diaphragm plate. The welder was noted welding at 1G (flat position) utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16” diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3160-1. The plates were preheated and maintained to required 225°F temperature using Miller Proheat 35 Induction Heating System. After the welding completion of the root pass, ABF QC Bernie Docena was observed performing MT on the root welded T-joints and butt joint. No relevant indications were observed. This QA also performed random MT on the same welded root pass with noted same result. The welder resumed FCAW-G welding fill pass to cover pass until the end of the shift where the welder has completed the four weld joints #073(1 and 2) /#074 (1 and 2). The welder performed the post weld heat treatment (PWHT) using the same preheat temperature and heating machine and held it for three hours as required.

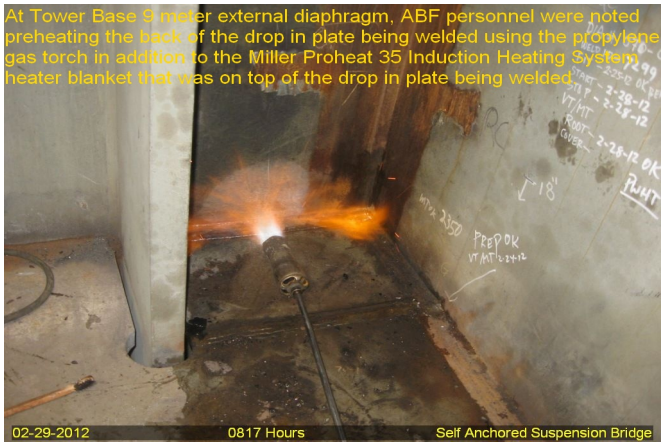
2. Center diaphragm drop in plate WD1-A49 weld joint #073(7 and 8) /#074 (7 and 8), ABF welder Jin Pei Wang was observed perform root pass welding on the PJP T-joint between the 45mm drop in plate and shear plate and

splice butt joint to diaphragm plate. The welder was noted welding at 1G (flat position) utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16" diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3160-1. The plates were preheated and maintained to required 225°F temperature using Miller Proheat 35 Induction Heating System. After the welding completion of the root pass, ABF QC Bernie Docena was observed performing MT on the root welded T-joints and butt joint. No relevant indications were observed. This QA also performed random MT on the same welded root pass with noted same result. The welder resumed FCAW-G welding fill pass to cover pass until the end of the shift where the welder has completed the three weld joints #073(7 and 8) /#074 (8). The welder performed the post weld heat treatment (PWHT) using the same preheat temperature and heating machine and held it for three hours as required.

3. South external diaphragm drop in plates SD1-A53, SD1-A55, ND1-A51 and ND1-A54, ABF welder Luo Xioa Hua was observed performing fit up/tack welding on the four (4) drop in plates to shear /tower skin and diaphragm plates. The welder was noted using Shielded Metal Arc Welding (SMAW) with 1/8" diameter E7018H4R electrode. Where the root gap was noted more than 5mm, the welder performed the buttering into the drop in plate to close the gap during fit up. At the end of the shift, all four (4) drop in plates marked SD1-A53, SD1-A55, ND1-A51 and ND1-A54) for the South external diaphragm were fitted and tack welded.







WELDING INSPECTION REPORT

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Summary of Conversations:

No significant conversation ocurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer